

BULLETIN

OF THE

American Iris Society

October, 1927

No. 25

ON EARLY DWARF BEARDED IRISES

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Published Quarterly by

SCIENCE PRESS PRINTING COMPANY, LIME & GREEN STS., LANCASTER, PA. 1927

Subscription price to members \$3.00 per year, non-members \$1.00 per copy.

Entered as second-class matter March 8, 1927, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.



THE AMERICAN IRIS SOCIETY

ON EARLY DWARF IRISES

R. S. STURTEVANT

The first fruits of Dr. Wright's strongly developed interest in the Early Dwarf Irises suggests that there is coming a broadening of their use in gardens. Perhaps, too, the increasing interest in Narcissi will lead to a concentration of interest in the garden pictures at that season and with me at least combinations of narcissi and dwarf irises have proved most successful. So successful in fact that my use of the irises has been relegated largely to the purple varieties, leaving the daffodils in all tints of yellow to give lightness and grace.

Mrs. McKinney, as shown in her introduced varieties Black Midget and Glee, gives earnest consideration to the poise and grace of the small irises but in most varieties mass rather than form has been emphasized.

The species of this group seem almost unknown in our gardens, even the hybrid named varieties being too little used, and, as Dr. Wright has shown, most confused in nomenclature. The original confusion was and, to a great extent, is botanical and is due to the fact that there is an immense variety of geographical form varying both in color and habit of growth. Any one of these might receive a specific name when discovered by some early botanist and each record has but added to the troubles of later botanists. Then, too, under the modern development of breeding, we find that these so-called species hybridize and fruit very freely and often by bee pollenization, so that shortly there is great mingling of characters among the seedlings.

It was in 1901 that The Iris Plant and Bulb Co. of St. Martins, Guernsey, offered a wide selection of seedlings raised by W. J. Caparne, whose interest had been developed as a flower painter and later as a visitor to Sir Michael Foster's garden at Shelford. In this list one finds the varieties divided into three groups as to height and presumably time of bloom, the groups corresponding to our present Early Dwarf and Intermediate Irises. This list contains at

least 75 per cent. of all the varieties that we grow and in addition descriptions of lost varieties that possessed combinations of colors that we have never seen in this section of the bearded iris group. Some ten years later Goos and Koenemann listed other early irises of at least similar origin, and quite recently French and American breeders have added still more to the list. Mrs. McKinney was first in the field with her free-flowering Glee and dainty Black Midget, while Mr. Burchfield is offering many novelties and Miss Sturtevant is venturing a few. It seems only a matter of time before Mr. Caparne's grouping, 3-14, 6-9, and 10-16 inches will not only be completely duplicated but will merge insensibly into the later flowering forms.

He lists *I. pumila* of Southern Europe, *I. flavissima* of Siberia, and *I. mellita* from Transylvania as the parents of the first twenty-eight varieties, none of which with the possible exception of *Delicata* is available to-day. As in his succeeding groups the color range is large. Of group 11, *virescens*, *lutescens*, *chamaeiris*, *balkana*, *italica*, *olbiensis*, *biflora*, and *feberi* are listed as parents and again only a few are occasionally available. Curiously enough a collection of these was bought from a defunct nursery by the Bay State Nurseries, North Abington, Mass., about 1908 and hence distributed to a greater or less extent, though whether they still remain true to name is a mooted question. Group 111 which really brings us to the Intermediates brings in the blood of *statellae*, *nudicaulis*, *kashmiriana*, *bartoni*, and possibly varieties of the old *squalens* and *neglecta* groups. And again a number of familiar names carry rather unfamiliar descriptions. La Perle, which we know as a good dwarf pale yellow, is the "earliest tall yellow, 2 feet."

It is well indeed that Dr. Wright is studying such a confusion but it appears to me that arbitrary names and accompanying descriptions must start us all afresh.

I have, however, been led astray by interest in the history and development of these delightful additions to the spring garden and no one who has seen drifts of them on a slope in the rock-garden, or broad bands of them as a border can deny their beauty. Like the species themselves they are pretty shallow rooting and need replanting every two or three years. Like all irises they want good drainage, but unlike many they will endure some smothering by later flowering perennials. In planting, I space them 3-4 inches apart as one would bulbs and where no barrier or brick or stone marks the path edge I make the neatest and closest of lines in order to win

a trim effect. With such spacing three staggered rows make a foot wide band that even during a summer's drought may not prove too unsightly. It is not surprising when one considers their origin to find that some varieties have lush evergreen foliage and that others are almost leafless at certain seasons. Naturally the evergreens are not to be neglected when the garden beds are in full sight of windows.

Picture a trim little garden, rather intricate in its lay-out of beds and edge the paths with bands of iris color. The main path might be brodered with darkest purple, the central feature edged with rich crimson-purple and the little fly-away corner beds scalloped in white and yellow and then within swaying daffodils, lady tulips, or *Phlox divaricata* each in its assigned pattern. These dwarf irises lend themselves to such formal use but to my mind are even lovelier in swathes on a slope or tucked in the side crevices of a step or between the cobbles of a low wall. Their purple, whether red or blue-toned, is the most intense and the darkest bit of color that a gardener has unless aubrietias thrive (a rare circumstance in this country). The yellows and whites unfortunately so tend to be splotted or dimmed with color that one hesitates to buy sight unseen, and yet if carefully selected they give the same brilliance to a dry site that the daffodils will in a rich meadow soil. One of my especial spring pictures is a hundred-foot long border edged with yellow irises and starred behind with yellow tulips against a background of Kerria and the last lingering touches of Forsythia. The Kerria comes in but the one strong buttercup yellow, but the Forsythia has the deeper *spectabilis* and the lighter *pendulina* to vary its tone while, as for tulips, once begun I know not where to stop. The warmth of Honeymoon, the cool yellow of Ellen Willmott and Moonlight, the cream to white of *vitellina*, full-blooded Inglescombe, even the stupid but persistent Bouton d'Or receives its mead of praise in such a setting.

On slopes nothing could be lovelier than the lavender of phlox with deep iris purple and here and there, for contrast of form, the nodding heads of white fritillaries. The native *Arabis procurrens* in white is also a desirable neighbor, its close mats of dark green leaves covering every inch of earth about the iris. And all this you may have in the lightest of gravelly soils with just a scattering of humus added for their pleasure.

As to the behavior of these dwarfs under house culture I cannot do better than to quote briefly from "Iris in the Little Garden,"

by Mrs. McKinney, a book, by the way, which gives even more attention to these dwarfs than did Mr. Caparne who first developed them.

"I use flats, 9 x 12 about six inches deep. An inch layer of cinders with sphagnum moss over them is placed in the bottom. The mats of rhizomes are taken up before heavy freezing sets in, and are crowded into the flats, with rich compost pushed into the interstices. These may be stored in any light shed where they may freeze and be brought in at intervals as needed. Careful attention to watering is needed especially while in bloom. I have had a flat of *Statellae* remain in blossom over a period of three weeks in a north window, and no lovelier February decoration could possibly be conceived than a series of these flats in a wide window. With only a surface dressing of bone meal and fine compost after a roasting summer's rest the same flat has given three winters of excellent bloom."

Even my careless trials have been almost as successful and I was delighted to note that many a garden exhibit at the International Flower Show at New York last March boasted iris bloom.

SPECIES OF THE EARLY FLOWERING SECTION*

W. J. CAPARNE

I. pumila, three to four varieties. A very small plant, 2 to 3 inches; flower large in proportion, 4 inches high; type, red or claret-purple; single-flowered spathe. This is the earliest to bloom. The variety *coerulea*, which I have found to be quite sterile, is a very valuable plant, as also is the var. *bicolor*. White standards, purple falls.

I. pum. attica, a yellow-flowered form, is also very desirable. These plants are all most valuable for front borders, rockeries, walls, and exposed situations. They cover themselves with flowers and make a solid sheet of color, and at all times of the year are neat, compact little plants, whose distinct foliage looks well in contrast with other plants of similar stature which we may assume to be planted near.

I. italica, a much taller plant, with rich purple flowers, two or more to a stem, and reddish spathe-valves.

* From Vol. XXVIII, parts 3 and 4, Journal of the Royal Horticultural Society, 1904.

I. olbiensis, reddish-purple, and *I. balkana*, a bronzy-maroon-red with a blue beard and unique paddle-shaped green spathe-valves, is very fine if one could get it. It has many understudies.

I. virescens, creamy-white with a greenish cast, falls slightly marked; these are plants of 6 to 9 inches in height.

Several irises collected from differing South France, Riviera, Italy, and Greece stations seem to belong here as geographical varieties.

I. biflora is good in its several forms, has a long season of blooming, a tendency to fork low down within the tuft of leaves and throw two stems as well as two flowers to a spathe. This quality appears in several sub-species, as *I. fieberi*, a splendid plant, and attains its greatest development in *I. nudicaulis*, a plant with sickle-shaped leaves a foot long and an inch or more broad, flower-stems a foot or more high, and the whole plant covered with a glaucous waxy secretion like the bloom of the grape. This latter plant has given some very distinct new hybrids in which the main simple stem has run up to 16 or 18 inches, and bears correspondingly large flowers, retaining, too, the distinguishing "bloom." *I. mellita*, a charming tiny species with rich bronzy-maroon flowers, and *I. rubro-marginata* with scarlet spathe-valves, very tiny indeed; these are rare and valuable members of this group, which one would like to enlarge upon did time and space permit.

LIST OF HYBRID ALPINE IRIS SOLD BY THE IRIS PLANT AND BULB CO.

W. J. CAPARNE

The following list is from a manuscript letter from Mr. Caparne in 1921 and seems to me worthy of record. Some sixty odd other varieties were listed and distributed but "we cannot be certain at this length of time which they were."—*Ed.*

Alida, early white.

Arny, S. porcelain blue, F. delicate lavender blue, 4 in., popular.

Athalie, cream self.

Atlas, early dwarf, deep crimson, very popular.

Aureole, canary self.

Beatrice, yellow self, tall.

Berlioz, blue purple.

Bouquet, S. porcelain, F. red-lavender.

California, soft pale yellow.

Carl, deep purple, late.

Celia, light purple self, 8 in.

Charmer, early light cream self, tall.

Cloth of Gold, best and richest yellow. (Very few sold.)
 Curiosa, S. grey porcelain, mottled, F. raisin purple.
 Delicata, S. white, F. cream, 6 in., earliest white, neat, good habit, popular.
 Diana, early cream self, tall.
 Diogenes, bronzed purple, very popular.
 Dragon, cream self, F. upturned, crinkled, lined pale violet; distinct.
 Eclipse, red-purple self, tall, large flower.
 Eldorado, good indigo blue self.
 Ernest, grey self, strongly marked maroon at center, early, 6 in.
 Garnet, rich crimson, late.
 Garrick, S. lilac purple, F. deep purple, early, 12 in.
 Grandee, deep purple blue self, large, 9 in.
 Halo, late, S. white with dash of lemon, F. lemon, beard lemon; good.
 Harmonia, S. yellow bronze, F. brown on olive, beard rich orange scarlet.
 Haydn, S. porcelain, F. lavender; early, distinct, 12 in.
 Irene, early yellow.
 Jock, S. sulphur bronze, F. rich maroon, orange beard, flat flower.
 Josephine, early white.
 Jupiter, very rich deep yellow, one of the best.
 La Grande, tall cream white self, large.
 La Perle, early, tall yellow, popular.
 Leighton, large violet purple self.
 Leo, S. red purple, F. red violet, 6-9 in.
 Leo II, S. pale bronzed blue, F. light red crimson, 5 in., popular.
 Libra, S. blue, F. blue purple, beard white, 15 in.
 Mazarin, S. primrose, F. yellow, early.
 Meteor, rich purple self, 9-12 in.
 Milton, rich yellow, beard orange.
 Norma, earliest purple self, 6 in., popular.
 Obelisque, rich purple self, beard orange, 16 in.
 Othello, dwarf, red purple, bronzed; popular.
 Penelope, tall, yellow self, large.
 Puck, S. creamy bronze, F. maroon, beard orange, 6 in., a striking variety.
 Queen Sophia, S. sulphur, F. yellow, beard orange, early dwarf.
 Quilp, S. primrose white, F. blotched and lined purple, early, 9 in.
 Racine, white self, F. slightly veined, very popular.
 Rosalie, claret purple self, conspicuous white beard, popular.
 Sapphire, S. blue, F. deeper, early, 9 in.
 Sappho, S. white, F. red.
 Scott, S. porcelain, F. purple (rather like Puck).
 Sidonia, good yellow self.
 Snowball, early white self, F. sometimes greyed, 9-12 in.
 Stewart, early yellow self, 8 in. (Whole stock sold.)
 Uranus, bronzy red purple self, tall.
 Venus, S. white and blue, F. white, blue, and green strongly lined purple,
 6 in., popular.
 Vestal, white, 8 in., very good shape.
 Victor, S. white, F. tinged, small flower.
 Vivien, early cream, F. tinged, 10 in.
 Voltaire, earliest of all, sulphur to lemon self, F. slightly blotched.

OLD IRIS NAMES: DUPLICATIONS AND NEEDED SEARCH

A. H. WRIGHT

On February 4, 1927, we published about 650 names of dwarf-bearded iris. In the last half year since that date, 150 more have accumulated, making 800 names or spellings in all. No doubt others are in the offing. No one believes there are that number of dwarf-bearded iris. Everyone therefore can see that looseness of spellings, usage and confusion in names all make for complexity in the study of relationship, definition, and evaluation of the actual existent dwarfs. In a similar way, in larger groups such as Japanese iris, bulbous iris, and to a considerable degree in tall-bearded iris, confusion reigns, though the American Iris Society committee has made a brave and wonderful effort.

We have been groping for a sane method of simplification and unification of names of the dwarf-bearded iris, but cannot arrive at any conclusion until we have studied the iris themselves. Most emphatically, as the American Iris Society insisted, the iris must go under their Latin binomials and trinomials until we know where we are at. For example, we dare not say that *alba*, *albiensis alba*, *chamaeiris alba*, *nova alba*, *olbiensis alba*, *pumila alba*, *lutescens alba*, *statellae alba*, etc., are all the same, nor would it be wise for any committee, however erudite, to attempt to analyze them without study of the iris themselves. We dare not reduce the above forms all to *alba*, for we have reminders of *alba* (not the Bride), *alba* (the Bride), etc. Further study will reveal other dwarf name-forms in the literature of iris. We cannot evaluate the dwarf-bearded names of *aurea*, *chamaeiris aurea*, *chamoeiris aurea*, *lutescens aurea*, *nova aurea*, *pumila hybrida aurea*, *pumila aurea*, etc., as one. Probably we have more than one form. Furthermore, are they comparable to the "*lutea*" combinations of other dealers, or the *pumila*, *chamaeiris*, and *olbiensis* "*gelb*," "*jaune*" combinations of other countries? In other words, the nomenclature of the group is as confusing as the understanding of the iris themselves. We cannot, however, standardize properly the iris names or those in any other group until we know all the names employed in the groups of iris. We believe each group or section of iris ought to be thoroughly catalogued. Such an attempt we are making in the dwarf- and intermediate-bearded iris.

The American Iris Society in its very beginning issued an excellent Check List, which has been of very much service to all iris students. Later, the American Joint Committee on Horticultural Nomenclature (a long-needed committee) presented an alphabetical Iris Check List for its Standardized Plant Names. Each publication agrees that duplication of names, renaming old established names, loose translations of names and other such difficulties must be eradicated so that the present numerous originations of breeders and offerings of dealers add not to the confusion. We need catalogues of each section compiled. The names should not be limited to those in American trade or trade in general, but all name-forms in iris history. A huge order! One of the first needs of the Society is a complete published list of every iris known or named. But there are many names not in either published list. Any one of these missing names might be used for new originations. Many of these missing names are, however, in the original manuscript (List No. 7) of which the President of the Society speaks in his Check List. In these two published check lists some eighty-one cases of duplication occur.

With the manuscript list (No. 7) of 1922 at hand, the duplications instead of being 81 or 144 in all become (after a comparison of the two published lists, the original manuscript of the American Iris Society, my dwarf-bearded list and other notes) 319 cases of duplications. There are two quintuples (Othello and Nimrod in dwarf-bearded, tall-bearded, Japanese and bulbous lists). Herein is revealed the tendency in its extreme when two different bulbous iris bore the name of Nimrod and Othello. The case is even worse in Priam twice used in bulbous irises where in an article of 1847 two different Priams are described and one follows the other in the same list, *e.g.*, "Priam, white with red and violet spots, Priam, blue and purple." There are ten cases of quadruples where the name was used in four sections, (*e.g.*, Beauty, Diana, Clio, Mars, Penelope, etc.), nine more quadruples where the name was used twice in one section (*e.g.*, Formosa, Priam). There are 78 cases of triplicates (use of one name in three sections). There remain 225 pure duplicates (use of name in two sections).

The ending or suffix ought not to play a prominent part in official names. The literature of iris is too full of variations and variants of this sort to adopt any ending unless it is internationally endorsed. Witness L'Innocenza, L'Innocence, Innocence, Innocetia, or Majesteux, Majestieuse, La Majestiuese, or Ignace, Ignacite, Ignacito,

Ignatius, Ignatice, Ignititia, or Virgin, Virginie, Virginia, Virginica, Virginite, Virginal, Virginit, Virginalis, Virginitis. When a dealer or originator himself does not always spell his own introductions or originations the same, we cannot emphasize the ending, prefix and initials. I have been lost in the maze of Mongul, Mongol, Mogol, Mogul, Grand Mongol, Grand Mongul, Grand Mogul and Grand Mogol of various catalogues.

A German dealer or author and some others will prefer *Minerva* (Cassandra, Helena, Isabella, Iphigenia) the French, *Minerve*, etc. An Englishman will cleave to *Splendour*, *Favourite*; an American, *Splendor*, *Favorite*, *Helen* for *Helena* or *Helene*.

The American Iris Society is trying to improve this condition, and in most of the eighty-one cases of their published Check List has straightened out these difficulties and many more. But many cases might have to be reopened unless the whole evidence is at hand. For example, a list of 67 bulbous iris published 75 or 80 years ago reveals an Agatha, Aurora, Brilliant, Clio, Diana, Favourite, Incomparable, Jessica, La Beaute, La Tendresse, Orion, Paris, Priam (bis), Princess Royal, Rebecca, Rosabelle, Ulysses, William Tell—every one making some subsequent name in other sections a duplicate. Or every one of the other names of the 67 with a few exceptions is a new name to the published or manuscript list and should be known before judgment is passed on subsequent names to come. Furthermore, our test gardens should have each old variety it is humanly possible to secure. Before the war several European firms carried many of them. With the coming of so many excellent new iris since 1900 and the attendant natural "discard" of older varieties it becomes increasingly difficult to secure them. The effort for old iris for our test gardens must be made now. The determinations of proper names in cases of duplications in order to have authority must, if possible, be based on the old iris at hand or on its characters in some reliable personal experience to determine if it be a synonym or a distinct form. If the former, the case is simplified, but if not clearly so, then are we sure that our decisions will stand? Will we find ourselves in the same condition systematic zoologists and botanists found themselves?

The original Check List of January 22, 1922 (Bull. 4) and its successor of October, 1923 (Bull. 8), indicates that the Japanese and bulbous lists are not complete. I hope an earnest effort will be made to add to these, and also to the other sections, the older names of iris. Diligent search of the older sources ought to reveal

many names either entirely new or new to other sections of iris. These are ramblings of an iris tyro who in his first enthusiasm wants to see the new check list as complete as possible, and who hopes all members of the Society will generously respond to the committee's (Mr. Sturtevant, Mr. Wister and Mr. Krelage) and Mr. Gersdorff's requests for additions, omissions and corrections.

The hope of the avoidance of confusion in the future lies in suggestive names reduced to the bare bone of simplicity. None of the above quintuples, quadruples, triplicates, duplicates ought to be used. The choice of name should be a root or stem which by change of suffix or prefix cannot ordinarily be run into a name already registered.

A study of the duplicates, triplicates, quadruples, quintuples and of some synonyms reveal some interesting tendencies but we will content ourselves with presenting the following table of duplications, etc., as a striking object lesson of the past.

I Changes in Endings.

1. Suffix.

A. Single vowels.

- a.—ior, is, a: *e.g.*, Excelsior, Exeelsis, Excelsa.
- a.—ie, a: *e.g.*, Annie Jane, Anna Jane.
- e.—es, ius, is, e: *e.g.*, Diogenes, Diogene; Achilles, Achille; Virginalis, Virginal; Virginilis, Virginile; Vesuvius, Vesuve; Cerberius, Cerbere.
- e.—esse, ice, is, e: *e.g.*, Grandesse, Grandice, Grandis, Grande (possibly Grand).
- i.—is, i: *e.g.*, Albonis, Alboni.
- o.—us, o: *e.g.*, Comus, Como.

B. Simple Suffix.

- an, in—aine, ana, an, in: *e.g.*, Africaine, African; Mexicaine, Mexicana; Marjalain, Margolin.
 - able—abile, able: *e.g.*, Incomparable, Incomparable.
 - eau—eau, ion: *e.g.*, Madame Cherion, Madame Chereau.
 - o.—ara, a, o: *e.g.*, Municara, Munica, Munico.
 - te—tina, tin, tis, tial, tes, te: *e.g.*, Coelestina, Coelestin, Coelistis, Celestial, Coelestes, Coeleste, Celeste.
 - ce—tia, za, ce: *e.g.*, Constantia, Constance; Innocentia, Innocenza, Innocence; Ignatia, Ignace.
 - ce—titia, tia, tius, cito, cite, ce: *e.g.*, Ignatitia, Ignatia, Ignatius, Ignacito, Ignacite.
 - ix—ice, ix: *e.g.*, Beatrice, Beatrix.
 - ix—esse, ess, ix: *e.g.*, Eucharteresse, Euchartrasse, Euchartrantress, Euchartrix.
- (See vowels e, esse.)

II. Elisions.

1. Final vowel.
 - a.—Elfrida, Elfrid; azurea, azure; Eleonora, Eleonor, Sultana, Sultan.
 - e.—Philomele, Philomel; Pactorle, Pactorl; Rosamonde, Rosamond; Juliette, Juliett; Sultane, Sultan; Appoline, Appolyn.
 - i.—Albioni, Albion.
2. Suffix.

is, i—Albonis, Alboni.

ile, iles, alis, ale, il, al, ite, ica, ia, ie: *e.g.*, Virginiles, Virginile, Virginalis, Virginal, Virginal, Virginil, Virginite, Virginea, Virginia, Virginie, Virgin.

te—Mme. Pacquette, Mme. Pacquitte, Pacquita, Pacquit.
3. Prefixes.

The, La, Le, L', Die.

Mme, Mons, Mlle; Mr. Mrs. Miss; Lord, Lady; Count, Countess; Prince, Princess; Belle, Beaux; General, Admiral, Col., etc.; Dr.; King, Queen; Emperor, Empress; Duke, Duchess; President. Souvenir, Gloire, Grand.
4. Prepositions.

van, von, de, D', of, o'.
5. Lost duplications.

pp, p.—Sappho, Sapho.

tt, t.—Pacquitte, Pacquit.

ll, l.—Bellecourt, Belcourt.
6. Lost Syllables.

es, in—Jacquesiana, Jacquiana.

no—Chenodelle, Chedolle.

III. Interchanges.

1. Initial Consonants.

th, t.—Theresita, Teresita.

ch, c.—Chameleon, Cameleon.
2. Vowels.

a, e.—Minerva, Minerve; Maria, Marie.

a, o.—Marjalain, Margolin; Solomon, Salomon.

i, e.—Action, Acteon; Auriole, Aureole, Majestreuse, Majis-treuse.

i, y.—Hypolite, Hippolyte, Hippolyta; Appolyn, Appolin, Appoline.

us, o.—Comus, Como.

u, i.—Munico, Minico.
3. Diphthongs.

ae, oe, e.—Caerulea, Coerulea, Cearulea.

The table of duplications, etc., is presented as a striking object lesson of the past. Those starred are from the author's notes but not in the published check lists. Most of these * names are, however, American Iris Committee's manuscript check list. X means in American Iris Committee's manuscript but not in published check list.

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|---------------|--------------------|------------------|--------------------|
| Nimrod | Nimrod | Nimrod | Nimrod (bis) X | |
| Othello | Othello | Othello | Othello (bis) X | |
| Azurea * | Azurea * | Azure | | Azurea X |
| Beatrice | Beatrice * | Beatrice X | | Beatrice |
| Beauty | Beauty | Beauty | Beauty | |
| Butterfly | Butterfly X | Butterfly (Mmc.) X | | Butterfly |
| Clio | Clio | Clio X | Clio * | |
| Diana | Diana * X | Diana | Diana * | |
| Grandesse (La) * | (Grandice) ? | | Grandesse (La) * | Grandesso |
| Innocence * | Innocence | | L'Innocence | L'Innocence |
| Mars | Mars | Mars | | Mars |
| Penelope * X | Penelope | Penelope * | Penelope | |
| Atropurpurea | Atropurpurea | | | Atropurpurea (bis) |
| Formosa | Formosa * | | Formosa (bis) | |
| Junio X | Junio X | Junio X | | Junio (bis) |
| Priam * X | Priam | Priam | Priam (bis) * X | |
| Agatho | Alexander von | Agatha X | Agatha * | |
| Alexander von | Humboldt | Alexander von | Alexander von | |
| Humboldt | Humboldt | Humboldt | Humboldt | |
| Ariadne | Ariadne | | Ariadne | |
| Ariel X | Ariel X | | | Ariel X |
| Aspasio * X | Aspasio * X | Aspasio | | Aspasia |
| Astarte | Astarte | Astarte | | Astorte |
| Argus | Argus | | Argus X | |
| Aurora | Aurora | Aurora X | Aurora * | |
| Blue Bird | Blue Bird | Blue Bird | | |
| Blue Jay | Blue Jay | Blue Jay | | |
| Calypso | Calypso | Calypso * | | Calypso |
| Cassandre X | Cassandre X | | | Cassandra |
| Celeste | Celeste | Celestial | | Celestial |
| Californica | Californica | | Cassandra | |
| Canari * X | Canari X | | Californica | |
| Celia * X | Celia | Celia X | | Canari X |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|----------------|----------------|------------------|----------------|
| Circe *X | Chameleon | Chameleon | Chameleon | |
| Comus X | Circe | Circe * | | |
| Constance *X | Como | Constance X | | |
| Dainty *X | Constance X | Dainty | | |
| Diogenes *X | Dainty * | Diogene | | |
| Elfrida *X | Diogene * | Elfrid X | | |
| Empress *X | Elfrida *X | Empress X | | |
| Excelsior * | Empress X | Enchantresse X | L'Enchantresse X | Excelsia |
| Flora *X | Enchantress | Excelsior | Flora | Flora |
| Gertrude *X | Favourite | La Favourite | Favourite * | |
| Grand Mogul | Gertrude | Grand Mogul X | Gertrude X | |
| Haydn | Grand Mogul | Haydn * | | |
| Harlequin | Haydn | Harlequin X | | |
| Hebe | Harlequin X | Hebe X | | |
| | Hebe | Hero X | | Hera |
| | Hera | Hercules | | |
| | Hercules X | Hector X | Hercules X | |
| | Hector | Her Majesty X | Hector | |
| | Her Majesty | Hippolyte X | Her Majesty | |
| | Hippolyte | | Hippolyte X | |
| Isolde *X | Isolda X | | | Isolda |
| King of the Blue X | King of Blues | | King of Blues X | |
| | La Nuit | La Nuit X | La Nuit | |
| | La Pactole | Pactole X | | |
| | La Perle X | La Perle X | | |
| | La Tendresse X | Tendresse X | | |
| | Leander | | La Tendresse X | |
| | Lillocina | | Leander | Lillocina |
| | Louisa * | | Lillocina | |
| | Majesteux | Majestieuse | Louise | |
| | Mandarin | Mandarin | La Majestuese X | |
| | Melpomene * | Melpomene | | Melpomene X |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|----------------|------------------|----------------|----------------|
| Milton | Milton * | Minerve * | | Milton X |
| Neptune *X | Minerva | Neptune | | Minerva |
| Osinis * | Neptune | Oberon X | | Oberon X |
| Pearl *X | Osinis | | | Osinis |
| Peter Barr * | Pearl X | Pearl X | | |
| | Peter Barr | Peter Barr *X | | |
| | Perfection | Perfection | Perfection X | |
| | Proserpine | Proserpine | Proserpine | |
| | Psyche * | Psyche | Psyche | |
| Queen | Queen | Queen X | | |
| Rembrandt | Rembrandt | | Rembrandt X | Rembrandt |
| | Raphael | Raphael X | Raphael | |
| Sappho *X | Sappho | | Sappho | |
| Sea Gull | Saturn | Saturn | | Saturn |
| Socrates | Sea Gull | Sea Gull | | |
| Spectabilis *X | Socrates X | Socrates X | | |
| | Spectabilis | | Spectabilis | |
| | Sultan | Sultana X | Sultan | |
| | Surprise | Surprise X | Surprise X | |
| | Sweet Lavender | Sweet Lavender * | | Sweet Lavender |
| Thetis *X | Thetis X | | | Thetis |
| Unique | Unique *X | | L'Unique | |
| Uranus | Venus | Uranus *X | | Urania |
| Venus | Victoire | Venus | | |
| Victor *X | William Tell | Victor | | |
| | Thalia X | William Tell | William Tell * | Thalia (bis) |
| | Achilles X | Achille | | |
| | Admiral | Admiral | | |
| | Adonis | Adonis | | |
| | Agnes | Agnes X | Adonis | |
| Alice * | Alice | | | |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|-----------------|-------------|---------------|----------------|
| Alida * | | Alida | | |
| Alphonse *X | | Alphonso X | | |
| | Amethyst X | Amethyst X | | |
| Anna *X | | Annette *X | Anna | |
| Annette *X | Annie Jane | | Anna Jane * | |
| | Anton Mauve X | | Anton Mauve | |
| | Aphrodite | Aphrodite | | |
| | Appollo X | Appollo | | |
| | Appolyn | Appolyn X | | |
| Aramis | Aramis X | | | |
| | Arabi Pacha | | Arabi Pacha X | |
| | Argentea | | Argentea | Artemis |
| Artemis *X | | | | |
| Atrocoerulea | Atrocoerulea | | | |
| Atroviolacea | Atroviolacea | | | |
| Attraction * | Attraction | | | |
| Aureola | Aureole | | | |
| | Avalanche | | Avalanche | |
| | Bacchus *X | | Bacchus X | |
| Barbara | Barbara | | | Baxteri |
| | Baxteri | Beatrix | | Beatrix |
| | Beethoven | Beethoven * | | |
| | Belisaire | Belisaire X | | |
| | Blanche | | | |
| Blanche * | | | | |
| Blue Beard | | Blue Beard | | Blue King |
| Blue King | | | | |
| Bride (The) | | Bride X | | |
| Bridesmaid | Bridesmaid | | | |
| | British Queen X | | | |
| Coerulea | | | | Coerulea |
| Calliope *X | | | British Queen | Calliope X |
| Canary Bird | Canary Bird | | | |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------|-------------------------|
| Cecily *X Chancellor * | Caprice Cassius X Cecilia Chancellor Charles Dickens | Caprice | Cassius X | |
| Charmer Chloris *X | Chrysolora X Clara Butt Cleopatra | Charmer Chloris X | Charles Dickens X | |
| Cleopatra * Clotho *X | Chrysolora X Clara Butt Cleopatra | | Chrysolora Clara Butt | Clotho *X Coelestina |
| Coelstis *X Coerulea *X | Coelstina Coelstis X | | | Coerulea |
| Compacta | Comanche | Comanche | | Compacta |
| Conspicua * | Comtesse de Paris X Conspicua | Comtesse de Paris X | | |
| Crepuscule (Le) * | Constantia X Crepuscule | | Constantia X | |
| Cyanea *X | Cygnat Daimyo Dandy Darling X David X | Cygnat X Daimyo | | Cyanea X |
| David | David Bless De Lesseps X Delight Diadem | David Bless De Lesseps X Delight Diadem X Distinction | Dandy X Darling David Bless De Lesseps | |
| Don Carlos *X | Don Carlos | Dr. Ed. Regel X | Dr. Regel | Distinction |
| Dragon * | Dragon | | | |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-------------------------------|
| Duc d'Brabant | Duc de Brabant Belcourt X Duchess of Brabant X | Duchesse de Belcourt X Duchess de Brabant X Duke of Norfolk X Eclipse | | Duke of Norfolk Edna Perry |
| Eclipse | Edna Perry Eldorado X Eleanor *X | Electra Emperor | Emperor | Eos |
| Eldorado *X Eleanor *X Electra *X | Esmeralda | Esmeralda *X Eucharis X | | Eucharis X |
| Eas *X | Fairy Fascination X Fenelon *X Flaked Beauty X Florida ?X Ganymede Garriek Glow * | Fascination Ganymede * | Fenelon X | Flaked Beauty |
| Fairy *X | Florida *X Garriek | Glow X Glory of Harlem Gloriosa X Gold Bound | | |
| Florida *X Garriek | Glow * Gold Bound Gold Cup Golden Fleece Golden Nugget X Goldfinch Gorgeous Gonzalve Gracilis X Halo | Gloriosa X Gold Bound Golden Nugget X Gonzalve de Cordone | | |
| Golden Fleece | Goldfinch * | | | |
| Gorgeous * | Gracilis | | | |
| Graminea | Graminea | | | Graminea |
| Halo *X | | | | |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|--------------------------------------------------------------------------------|----------------------------------|----------------------------------------|----------------------------|
| Hereward | Hamlet Hannibal Helene Henry IV Hereward X Hermione Hyperion | Hamlet X Hannibal X Helene | Henry the Fourth * | |
| Ida * | Incomparable | Hermione X Ida X | Hyperion X Incomparable * | |
| Irene *X | Isabella X Isis Jeanne d'Arc Jessica Julia X | Iphigenie Isabella | Jeanne d'Arc X Jessica * Julia X | Iphigenia Irene Isis |
| Juliette | Julius * | Juliett X | Julius | |
| George V King Humbert | King George V | King Humbert IX Krelagii | | |
| Chaimante * | La Beaute | La Chamante Esmeralda | La Beaute * | Krelagii |
| | La Esmeralda X La Fiancee *X La Neige Lady Franklin Laura | Lady Franklin * | La Neige Laura | La Fiancee X |
| Leighton *X | Leighton X Leonidas Leopard Leopold Lord Kitchener X | Leichtlini X Leonidas X | | Leichtlini Leopard |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|--------------------------------------------------|-----------------------------------------------|--------------------------------------|---------------------------|
| Lord Palmerston X | Louis Van Houtte Lurida Magnifica | Lord Palmerston Louis Van Houtte * | | Lurida |
| | Marye Stuart X Mary | Magnifica X Marie | Madonna X Marie Marie Stuart X | |
| Meteor X | Mikado Mirage Miranda Nelly Nestor X | Mary X Meteor X Mikado Mirage | | Miranda |
| Nellie *X | Nestor X | Nestor X | | |
| Norma * | Ophir X | Norma | Ophir X | |
| Oriole *X | | Oriole X | Orion * | |
| Oscar | | Orion Oscar Pallas X Paragon X | | Pallas Paris Pharos |
| | Paragon Pharos X | | | |
| Philomel *X Phoebus *X | Pioneer Pluton Pollux President | Philomele X Phoebus Pioneer X Pluton | | Pollux |
| Princess Ida * | Princess Royal Puck | President X | Princess Ida Princess Royal * | |
| Puck *X Purity | Purple Prince | Purity | | Purple Prince * |

| DWARF-BEARDED INTERMEDIATE-BEARDED | TALL-BEARDED | JAPANESE | BULBOUS | OTHER SECTIONS |
|---------------------------------------|--------------------|---------------------|---------------------|----------------|
| Purple Queen | Purple Queen | Pyramid | Purple Queen | |
| Queen Alexandra | Queen Alexandra | Queen Alexandra * X | | |
| Queen Emma | Queen Emma | | Queen Emma | |
| Queen of the Blues | Queen of the Blues | | Queen of the Blue X | |
| Rebecca | Rebecca | | Rebecca * | |
| Regina | Regina | Red Riding Hood | Regina X | |
| Romeo | Romeo | Romeo | | |
| Rosabelle | Rosabelle | | Rosabelle * | |
| Rosalind | Rosalind | Rosalind X | | |
| Rosamond | Rosamond | Rosamond X | | |
| Rosy Morn | Rosy Morn | Rosy Morn | | |
| Royal Purple | Royal Purple | | | |
| Sarah | Sarah | Sarah X | | |
| | Sherwood X | Sherwood X | | |
| | Sir Trevor | | | Sir Trevor |
| | Lawrence | | | Lawrence |
| Snowball * X | Snowball X | Snowball X | Solfatare X | |
| | Solfatare X | | | |
| | Souvenir | Souvenir | Speciosa | |
| | Speciosa | | | |
| | Splendour | Splendor X | | |
| | Spotted Beauty | Spotted Beauty | | |
| | Stella X | Stella X | | |
| Sulphurea | Sunset X | | Sunset | Sulphurea |
| Sunrise | Superba | Sunrise X | | |
| | Sweetheart | | Sweetheart | Superba |
| Sidonie * X | Sydonie X | | | |
| | The Moor X | Snow Queen | The Moor | Snow Queen |
| Thetis * X | Thetis X | | | |

| DWARF BEARDED INTERMEDIATE-BEARDED | TALL BEARDED | JAPANESE | BULGARIAN | OTHER SECTIONS |
|---------------------------------------|--------------------------------------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|
| Una * | The Dove Topaz Tricolor X | The Dove X Topaz Triumph | Tricolor * Triumph | Una |
| | Ulysses Vesta X Vesuve | Vesta Viceroy X Victory Hugo X | Ulysses * Vesuvius Viceroy | |
| Villareal * | Victor Hugo Victoria X Villareal Violacea Violet Queen | Violet Queen X Virginal X | | Victoria X Violacea Virginalis |
| Voltaire X | Voltaire X | | Von Humboldt Yellow Perfection | Von Humboldt |
| Yellow Perfection Zenobia *X | Zephyr | Zenobia Zephyr | | |

THE STATELY IRIS AN ORNAMENT TO ANY GARDEN

FRANCES DUNCAN

From the *Los Angeles Times*, Sunday, August 14, 1927

One of the most poetic of flowers is the iris. So insistent in their bid for attention are the great dahlias, that the iris, in California, has not yet come to the full share of popularity that is now its due. Yet it is a flower of stately beauty, wonderfully rich in color and almost as easily grown and permanent when once established as that prince of die-hards, the red geranium.

With all its ease of cultivation, the iris is an aristocrat. Beside its ancient lineage, the gladiolus, the dahlia, and the chrysanthemum are mere infants. It is almost as old as the Egyptian lotus. Also it is linked with history. As definitely as the rose is a part of English history, the fleur-de-lis belongs to France. The "lilies" which Jeanne d'Arc embroidered on her banner were fleur-de-lis or irises. Probably Eve grew them in Eden, for to-day Asia is particularly rich in irises and very likely they flourished along the banks of the river that flowed "eastward from Eden."

To the amateur gardener, one of the most potent attractions of the iris is its extreme ease of culture. Not all irises will grow in all soils, but some may be found to grow in any given soil, be it dry or gravelly, or moist and boggy. *Iris pseudacorus* will even grow in an aquatic garden. The most tolerant of irises in the matter of soil are those of the pogoniris group, the "bearded irises," which at one time were generally known as German iris. In almost any soil and situation these irises will thrive—open sunshine, or partial shade, gravelly and sandy loam, or beside the water garden. I have seen them growing happily under eucalyptus trees. Nor do they, under such conditions, thrive and bloom for a single season only. Once planted, they go on like Tennyson's brook. I have seen them growing, spreading under trees and a rather uncared-for shrubbery, with but a very occasional chance at enjoying the irrigation which blest the rest of the place. Yet they were blossoming, year after year, though given no attention whatever.

Naturally, one doesn't recommend this method of gardening, but the iris's ability to bloom and flourish under conditions which would ruin many another plant and drive roses to despair, is worth noting by those who love the flower, and have scant time for garden tend-

ing. Also irises may be taken up and replanted at almost any time of the year. For the best results, however, here are a few cultural points:

How to Plant Irises

The best time for planting is late summer or early autumn, here in California preferably from August up to December. "The ground should be pulverized deeply," says Morton Sandford, the iris grower of the Carbon Canyon Road near Chino, "then fill with water the hole, or trench, made for setting the plants; after this settles, 'mud in' the roots, pressing the wet earth around the small, fibrous roots which should extend downward, with the large root (rhizome) about an inch below the surface of the ground. The rhizome should then be covered with dry, loose soil. If this work is properly done, the newly planted irises should not be disturbed nor watered for ten days or two weeks. After this, water and cultivate carefully about every two weeks until growth starts, being governed by the weather and soil conditions as to the amount of water. Irises like a well-drained location and dislike 'wet feet' as roses do. Be careful in working about the roots of newly planted irises that you do not disturb them. Never use barnyard manure near iris roots; a little bone meal worked in is preferable. If the soil is sour, mix in a little lime."

Where to Plant Irises

Irises, like many other bulbous plants and bulbs, suffer from our habit of planting always in rows or in solid phalanx, and treating them as an assemblage of color. The form of the flower is very beautiful, its poise and erectness rising above the sword-like leaves are full of character, and these are lost when it is thickly planted in a square bed or grown in tight rows. It is happiest when set in groups with shrubs for a background, or near the water garden, where the reed-like character of the leaves harmonizes with papyrus and other pool margin plants, and the flowers are reflected in the water. The group planting has this advantage, that when the flower is not in bloom, no loss is felt; the foliage merges with the background, and when the stately flowers appear, their beauty of form shows to perfection.

Selecting Varieties

Those, to whom "iris" means either the rather small purple or the common white sort, know but little of the beauty and rich color

of the flower. Wise gardeners frequent flower shows, and go in person to the fields and experimental grounds of growers, where a liberal education may be obtained as to differences in color, shading, and habit which the most carefully written catalogue cannot give adequately. And then flower preferences are so much a matter of individual taste. It is a good idea when starting one's iris collection, even if funds are limited, to include at least one iris of unusual beauty. Mrs. Elizabeth Briggs, the gladiolus expert, said that when buying her first small order of gladiolus bulbs she included one bulb of Mrs. Frank Pendleton and that one bulb was worth more to her than all the rest.

At the Banning flower show—a small show beside many of the others—was exhibited as magnificent a stalk of Iris Ambassadeur as I have seen in Southern California. This is listed in the catalogues as “36 inches,” but the stalk shown must have reached five or five and a half feet in the garden, beautifully branched and with gorgeous flowers, smoky lavender standards tinged with bronze, and falls of reddish violet. The ability to exhibit a flower of this sort gives more of a prideful thrill than the possession of many less notable ones. Another rarely beautiful iris is San Gabriel, of California origin. The Southern California Iris Gardens had magnificent fields of this variety abloom this spring. San Gabriel grows to a splendid height, its stem is much branched and it blooms in regal abundance. The petals are a delicate lavender, with mauve, but it is a Southern Californian and doesn't endure extreme cold, and is an early bloomer.

Among the less expensive but delightful varieties is Dr. Bernice, with coppery bronze standards and with falls of a velvety crimson-brown. This has fine foliage, blooms late, and is effective in group planting, making a charming color in the landscape. There is Vilmorin's Caprice, which is a deep reddish-purple with yellow beard; and the old *florentina alba*, with flowers of a porcelain-white tinged with lavender, a very early sort, which in old days and in grandmother's garden was grown also for the roots from which “orris root” was made. Among the violets and purples are Monsignor, pale violet flowers with deep veining of royal purple, that “color of popes.” Then there is the lovely Isoline, which has a definitely silvery sheen on its soft lilac standards and reflexed falls of gold and mauve. Queen Caterina, Lent A. Williamson, Rev. Wurtelle are good irises. Mother of Pearl is a stately variety

of beautiful color whose name describes it with unusual accuracy.

Most of Farr's introductions bear Indian names—Navajo, Massasoit, and many of them, like Navajo, have distinctively Indian coloring.

Notable among the newer irises is Morton Sandford's Romance, the standards a deep wine and the falls deep garnet tinged with cream underneath; this iris has a long blooming period. Stillman Berry's Cacique, an apogon, is an almost claret red—a slender iris this, rather like the Spanish iris in appearance.

To the uninitiated, the flower of the Spanish iris looks like an iris, and the leaves like grass. The real difference, however, is in the root, the Spanish iris being a bulb, not the centipede-like affair known as a rhizome, from which the bearded, or pogoniris, springs. Among the Spanish irises one finds clear yellows and dashes of orange on violet petals, as definite as the blotch of crimson on the blackbird's wing; this is especially noticeable in the lovely Rembrandt.

These are but a few of the easily obtainable irises. Those interested should join the Iris Society, and become acquainted with the sibirica group that is fond of water, with the hexagona group, the splendid and stately Japanese irises, the Mediterranean group, with *reticulata*, *dichotoma*, and with *Iris unguicularis* (or *stylosa*), which is kind enough to bloom in winter; then there are *albicans* and *japonica* for earliest spring. An iris enthusiast may have from 200 to 1,000 different varieties in his collection.

Like the gladiolus, the iris is sufficiently "fool proof" for a child to grow, and interesting and varied enough to attract the connoisseur.

TID-BITS 14TH

There are rumors that our Tid-bits in the last issue aroused considerable comment for their frank criticism and evaluation of new varieties and yet no one has seen fit to present his views for this issue except Mr. James. I wish that more members would present their side of the case equally frankly.

From E. O. James, California

May I add a word to your interesting comment upon Mrs. Hires's letter (July BULLETIN, pp. 32 ff.)? It appears to me that she over-

states the case when she says that "not one person with whom I talked but felt that every breeder was out for what he could get," etc. I hope at least that there is a kinder temper among iris lovers in general. Now I have had my share of disappointments in buying irises. On the other hand, though I cannot call myself a breeder—for I am offering no seedlings for introduction—I think I can understand more fairly the breeder's side of the matter. For six seasons I have been mating irises. Setting aside the first two years, when I was merely learning the elements of manipulation, I have during the last four flowering seasons made more than one thousand different matings, *i.e.*, I have bred, cured, and planted more than eight hundred different lots of seed, each with a distinct parentage, and now have some two hundred additional lots awaiting the planting. Many other breeders have worked more intelligently, no doubt, but few, I think, have worked harder. The work of 1927 and 1926 cannot yet be judged, that of 1925 only partially. But out of 325 different matings made in 1924, the five or six best seedlings rate, in my judgment, no higher than the lower 80's. Yet in that year I used practically every known breeder of proven value except the Dominion line. I think I am in a position to say, therefore, that no novice can appreciate the cost in labor, time, and general overhead of producing one high class iris.

Let me cite the case of the late William Mohr. (I did not know him, and have enjoyed no favors in buying the seedlings he bred.) For seven or eight years he devoted to his iris experiments an acre of valuable land; he bought in America or imported from foreign countries every species that was likely to have breeding value. The amount of time he gave, no one knows. A labor of love, certainly, and so accepted by him. From the very first, he kept careful records of every mating. An exceptional student of plant genetics, he studied the special problem of iris genetics for years. Through one of Mr. Mohr's best friends I have caught glimpses of his enthusiasm, the delight he felt in planting, the pleasure in seeing occasionally a good result. But financial profit? Friends, the Japanese tenant who raised canning tomatoes on the adjoining field made more money per acre, year by year, than Mr. Mohr did from his irises.

A very few first-class irises have been accidental. And with the growing competition, I venture to predict that a still smaller proportion, in the coming years, will be accidental. The good breeder will know his blood lines. How? By endless experiments, records

and study. I will cite one instance. What result will one get by crossing small plicata upon small plicata? It cost me several days of labor, and three years' use of a fair-sized garden plot, to try out four or five such combinations. Result? Nothing salable. Experience? Yes. But not worth one cent on the market. Again: it interests me to find in a certain group of seedlings mated in 1924 an almost perfect duplicate of Mr. Shull's Sir Galahad, but it does not compensate me financially. (No grudging Mr. Shull his reward, which I am sure was not excessive.)

Of course I have had no end of sport: anticipation, the not infrequent thrill of seeing a pretty seedling blooming for the first time, and by no means least, a growing sense of humble reverence for the men who have mastered to a degree the subject whereof I still remain a blundering student. It would be churlish to crab about it all. Even a school teacher can afford an occasional luxury; and iris breeding has been my luxury. On the more optimistic side, I have some ground for belief that a few seedlings of the 1926 crop, and a few more to come from the 1927 crop, may produce introducible irises. But profit? My intermittent hired man, hoeing at fifty cents an hour, will have made more money out of the game than I. Will the five or ten salable seedlings pay me for the thousands that have gone or will go into the scrap pile?

As to the suggestion that breeders sell pedigreed seed, let us consider the aftermath. I will choose an immediate instance. I have on my desk at this moment a bag containing sixty plump seeds of (Alcazar \times Seedling 17) \times Moa. Seedling 17 is an unnamed Mesopotamica \times Parisiana, given me by Mr. Mitchell; its outstanding quality was an unusually fine gold beard with rich golden hafts. The Alcazar \times Seedling 17 is, to my mind, a very lovely thing with a luminous topaz dome, and richer center than Alcazar. Moa, the pollen parent, should put into this combination something of the rich texture of the Dominion race. Now it happens, because this mating too nearly duplicates another, and because I am crowded for room, that I shall not plant this seed. What is it worth? The same old problem. I can predict with fair confidence the probable result. I should expect that a few of the best seedlings of the twenty or more that might grow to maturity would rate in the middle, or possibly the upper, 80's. Since nature occasionally (?) surpasses man's calculations, it is barely possible that one seedling might rate 90. Suppose I sell it. What is a fair price? Four years ago I

might have paid ten dollars gladly for just this packet of seed. The Dominion glamour was very strong in my mind then. (The fact that I am not planting this seed this fall because I have better seed would call for a chapter on one's growing sense of iris genetics.) Well, waiving the price of the seed (and I know I couldn't sell for what would amount to a Woolworth clerk's wages for the time spent in producing it), suppose I sell it to a novice. What then? He plants it, hovers over the sprouting seedlings, waters them, transplants them, cultivates them for two or three years. When they bloom, *they must be wonderful*. Has he not paid a dollar for the seed and lavished two or three years of care upon the plants? They simply have to be fine. His friends all visit his garden and exclaim. They invent names for every seedling—or for at least half of them. Now tell me, in what way would we be better protected from an inundation of mediocrity? This novice grower has not two or three thousand other seedlings to sober his judgment. Why will he be a better critic than I? Or why will his novice friends be better critics than the exceedingly hard-boiled jury who will judge the seedling in my garden? Or put the case that the novice buyer fails to get germination (and the chances are that he will fail); or that, getting it, he fails to find at least 90 per cent. of potential Ambassadeurs or Dominions in the result. Will he not say, then, that I cheated him? He has lost a dollar and a lot of time, and I am a fraud. (If he could only see my discard heap, he would know that the breeder, too, has disappointments.)

You see, it all comes back to the one thing: you have to depend upon the breeder's knowledge and integrity. What is pedigreed seed? The seed resulting from mating the two highest priced irises in the garden? Or the two with the highest symposium rating? Such seed might not be worth ten cents a quart. I will give to any inquirer the bag of seed described. I will not give another bag of seed from a mating of two unnamed and utterly unknown seedlings. The latter has a much higher value to me; but if I went into the seed-selling game I couldn't sell Seedling 31 \times Seedling 45, even though I know it is worth double Aphrodite \times Dominion (a mating which I have not been foolish enough to make). If a breeder cannot be trusted to select and sell a good seedling, can he be trusted to sell really valuable seed? And if the buyer balks at paying five dollars for a good seedling, will he be willing to pay a price for seed

that will represent a clerk's wages for the investment, time and knowledge required to produce it?

After all, what is a fine iris worth? What do our wealthier garden lovers pay for oriental rugs, automobiles, etchings, antiques, pearls? Is there one iris lover who can truly say that he has not paid more for something involving either vanity or whim or fashion, than for an iris?

Let us have test gardens, jury ratings, free exchange of critical opinion. Severity of competition will increase; and out of it will come irises as much finer than the average to-day as the average to-day exceeds that of forty years ago. "In it for all they can get out of it?" Well, what have they got? Mr. Dykes, when I met him, did not dazzle me with a display of wealth. Mr. Shull, I understand, still has to work for a living. The two best breeders whom I know personally drive cars that would hardly win prizes in any auto show. And I haven't noticed the name of any iris breeder crowding Henry Ford's off the top of the income tax list. No, friends, if you want easy money, try chinchilla rabbits or ginseng or canvassing for a life of Lindbergh.

After all, we are dealing in beauty, a quality that can never be standardized as accurately as wheat or steel or rubber. Tastes will differ; critical judgments will sometimes be at fault. If a breeder did not feel enthusiasm, he would get just nowhere. If you love a good iris, isn't it reasonable to believe that the breeder does too?

Finally, not only do tastes and critical judgments vary, but so do soils, climates and other factors. I have been humbled often by seeing an iris I have condemned growing beautifully in another garden. Fragonard, for instance, imported last year, was this spring the finest iris in its color class that I have ever seen—a warm, luminous amethystine pink of excellent substance and form. A wise and sweet-natured old beekeeper, Dr. C. C. Miller, used to say when debate waxed acrimonious, "Friends, had we not better say, 'It is thus and so, or it is not thus and so, *in my locality*'?"

If a breeder introduces too many mediocrities, the natural remedy will soon make itself felt. But will the most disgruntled buyer be willing to give up all his irises for the price paid? If he paid rather too much for one, must he not confess that he paid for another far less than the delight it has given him was worth? To the novice, it appears very simple: just pollenize this with that. I wonder if the novice can imagine the five or six iris generations and fine fractional combinations that went into Mr. Shull's Copper-

smith. Or into any other really good iris. What is the effort worth to combine, say, the vigor and size of *mesopotamica*, the climatic hardiness of the *pallidas*, the perfect branching of the best *trojana* group, the floriferousness of George Yeld, the texture of the Dominion line, and the pastel beauty of Nancy Orne? It would take ten years to perfect it. If a breeder succeeds, we will pay him three fillings of gas!

The Chemical Acceleration of Flowering

Praktische Anleitung zum
Frühtreiben von Pflanzen mittels Blausäure.
von Prof. Dr. Gaszner und W. Heure.
Berlin 1927
Verlagsbuchhandlung
Paul Parey
S. W. 11, Hedemannstrasse 10 u. 11.
Pages 27-28.

(Translated by B. Y. Morrison)

In the experiment carried out by us, rhizomes of *Iris pumila* came in for testing; nevertheless it should be noted that the rhizomes of other iris species might be treated in the same way. The culture of the plants after treatment followed the usual best practice with a temperature not exceeding a maximum of 15° C. The use of higher forcing temperatures must be avoided, because an injury to the flower color follows. The gassing of the iris produces an acceleration of flowering of at least six weeks. The best treatment of the gassing may be decided by the following table:

Gassing Table for *Iris pumila* (2-hour treatment).

| Time of Treatment | Plant Material | Temperature during Treatment | Necessary concentration of Hydrocyanic gas in percent by volume |
|---------------------|----------------|------------------------------|-----------------------------------------------------------------|
| October to November | Dormant | About 0° | 2 Percent vol. |
| | | " 5° | 1½ " " |
| | | " 10° | 1 " " |
| | | " 15° | 1 " " |
| | | " 20° | ¾ " " |
| December to January | After dormancy | " 0° | 1½ " " |
| | | " 5° | 1 " " |
| | | " 10° | 1 " " |
| | | " 15° | ½ " " |
| | | " 20° | ¾ " " |

From Mrs. Joyce, Kenya Colony, East Africa

You have no idea how dry it is and ordinarily the iris get no water except rain. We have short rains starting in October or November and long rains the end of March or April. From the end of May there is not a drop and the mid-day sun is very hot, though the days are never like an American summer—more like late May days in Virginia. All the transplanted irises have made lovely growth, but only Alcazar, Leverrier, Amas, Perfection and Isoline have flowered at all, and Alcazar is the only one that was strongly flowered except *tectorum*. There are twelve clumps of that in the border against the house and since the end of December there has been a flower on one clump or another for six months.

Caterina, which is one of the best iris further up country where there are cedar forests and more rain, has not made a bud though big and healthy in plant. I've written Mr. Salbach to see if California rhizomes will do better with me than the English ones. Some fourteen other varieties have not budded either. Mr. Sturtevant once asked me about the variegatas. I tried Aurea, Mrs. Neubronner, Flavescens, and Minniehaha—they are all dead, the latter the only one that made any growth and flower. The iris foliage never dies down here, and *germanica* and *albicans* (which does not do as well) flower after both rains and if as sometimes happens we have a couple of inches of rain in January, they flower again—I mean mass flowering, there is a purple iris or two nearly all the year.

A remedy for iris borer from Mrs. Minnie E. Black, Illinois

I prepared a four-gallon jar of strong Bordeaux mixture, and put a gallon of it in a tub of strong soap suds. Then soaked the roots of the iris with the result that in proceeding with the transplanting all the borers had vanished and the rhizomes were white and thrifty looking. Some of my friends are using the Bordeaux straight and full strength without fatal result.

From Joseph Oertz, Belgium

This season has been for me, a beginner, a very busy one, as I had to check about 300 plants and discard synonyms. Another season and I think my set of irises will be in good order, each of them having its data card which will be kept up correctly. In Belgium

there are no iris enthusiasts so far, and I will have to depend upon myself and hope to find adepts in time.

I have visited Liège, Antwerp, and Brussels Botanical Gardens. Such iris as they have are very few and a lot of them are incorrectly labeled. I have, however, the promise of following which were correctly labeled: from Antwerp, *graminea*, *dichotoma*, *versicolor*, *swerti*, *fragrans*, *biflora*, *prismatica*, and *sisyrinchium*; from Brussels, *reichenbachiana*, *tectorum*, *aphylla*, *virescens*, *virginica*. Liège has got the best set, but they are all young plants, though I have the promise of an exchange next year and hope to get about fifty species together for next season.

I have had my first experience at exhibiting and the transport of flowers is no easy matter. On the 5th of June I showed three stalks each of 35 varieties at Ghent and received an Award of Merit with the congratulations of the jury. And on the 12th with 35 varieties of tall bearded, 10 apogons, and 5 varieties each of Spanish and English iris, I again received an award and the acclamations of the jury at Antwerp. I would have liked to exhibit at Brussels, but the flowers were damaged by the rain. I will continue each year and thus arouse in others an interest in iris.

Now about my garden. *Susiana* bloomed very late and I attempted some twenty crosses of which three with *La Beaute*, *Alcazar*, and *Cypriana*, respectively, succeeded. *Leichtlini Barbe Bleu* self-cross gave 25 fine seeds and I had many seeds on the tall bearded.

If any member wishes seeds of species let me know and I will make a special job of it next season, and I should be glad to exchange for seeds of California or other native species.

(Joseph Oertz, 41 Rue Horace, Andrelecht, Belgium, is proving a live member and I hope that members may feel like helping him by sending American varieties or by exchanging seed—plants of course cannot be imported without permit into this country.—*Ed.*)

Further notes on the Chelsea Show, 1927, from Miss L. Hetzer, Lowthorpe, Massachusetts

The show was in many ways better staged than ours, but whether the iris are better I cannot tell. I was especially attracted by Perry's new hybrids—they are charming. He, by the way, has finished with iris and is working on gladiolus. I had a good time

seeing the people and they certainly do more selling than we do at our shows. I append a few notes of noteworthy varieties: *chrysographes* \times *forrestii*, *tenax* \times *watsoni*, and particularly the reddish-purple *chrysographes* \times *douglasiana*. Margot Holmes received a silver medal. Te-bract also received a medal. They are dainty and delicate and will keep in a cut state for ten days—very good range of color, dwarf, and with distinctive veining. In a mass they blend like pastel shades. Mrs. Dykes won the Challenge Cup with six seedlings: Britonicus, a large pale yellow (silver medal), Akbar, Khama, Grunah, Cuparo, and Beltake. She also showed Zaharvon, a dusky bronze, almost self, with large fine flowers (selected for trial at Wisley), Amber, and Moonlight. Of Miss Sturtevant's seedlings Taj Mahal, Afterglow, Mother of Pearl, True Charm, Shekinah, and Sindjkha were in good shape, as shown by Orpington.

Santa Barbara was selected for trial at Wisley. Cuparo was one of the largest flowers in the show.

Book-note

"Garden Books, Old and New," compiled by Mary Evans and obtainable from the Pennsylvania Horticultural Society, 1600 Walnut Street, Philadelphia, for \$1.00, should lead many a gardener into new fields of interest. It is a well-classified list for the beginner.

OFFICERS 1927

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Notice

For information concerning Display Gardens write Mrs. Brewster Hoornbeek, The Maples, Elgin, Ill. Details of the plan are given in No. 18, page 20.

For information concerning the use of lantern slides and syllabus write Mrs. S. B. Waters, Edgecliff Point, Walnut Hills, Cincinnati, Ohio.

Mrs. J. Edgar Hires, Ardmore, Pa., as Chairman of the Committee on Exhibitions, will henceforth handle all matters concerning local shows. Please notify her of your plans as soon as possible.

Charles E. F. Gersdorff, 1825 N. Capitol St., Washington, D. C., as Chairman of the Committee on Registrations, should receive all catalogs published and all registrations from breeders, including corrections to existing check lists.

Details of the \$100.00 Prize offered by Robert Wayman will be found on page 40 of Bulletin No. 15.

Publications available from Science Press Printing Co., Lancaster, Pa. Checks payable to American Iris Society.

Bulletins of the A. I. S., Nos. 2, 5 (Symposium), 6, 7, 9 (Descriptions), 10 (Irises for the Beginner), 11, 12, 13 (Classification), 14, 15, 16 (Report on Sterility), 17, 18, 19, 20, 21, at \$.50 each to members. Nos. 1, 2, 3, 4 and 8 (Check Lists) are practically out of print and available in complete sets only.

Membership List as of December 31, 1925.

Bulletins of the Iris Society (English), No. 1, \$.50; No. 2, \$1.00; No. 3, \$1.00; No. 4, \$1.00.

Addisonia, Vol. 9, No. 4. Eight Native Species illustrated, \$2.00.

Les Iris Cultives. The Report of the International Conference at Paris, 1922, \$1.00.

For the Cornell Extension Bulletin, No. 112, send to N. Y. State College of Agriculture, Ithaca, N. Y.

For Farmers Bulletin 1406, Garden Irises, send \$.10 to the Superintendent of Public Documents, Washington, D. C.

American Iris Society Bulletin

R. S. STURTEVANT, Editor
GROTON, MASS.

Published in the interest of
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At present annual dues are three dollars per year which includes all publications issued by the Society during the year. Back bulletins can be secured by members at a nominal sum. No formal application necessary. Anyone interested in flowers eligible. We heartily extend an invitation to join us in our work.

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* From Bulletin 10, page 60.